REMARKS

Claims 1-24 remain in this application with claims 1 and 13 in independent form. Claims 1 and 13 have been amended. No new matter is believed to have been introduced through these amendments.

Applicant has amended paragraphs [0010], [0026], and [0036] to correct grammatical and typographical errors occurring therein. Specifically, in paragraph [0010], "as" was inserted to correct a grammatical error, in paragraph [0026], "weight' was inserted to correct a typographical error, and in paragraph [0036], the first occurrence of "to" has been deleted. No new matter is believed to have been introduced through these amendments.

Claims 1-24 stand rejected under 35 U.S.C. §102(b) as being anticipted by United States Patent Nos. 5,489,366 to Jongenburger or 5,352,807 to Shih. The Examiner states that both references disclose a purification method for purifying crude propylene oxide.

Applicant respectfully traverses the 35 U.S.C. §102(b) rejection on the grounds that neither the '366 patent or the '807 patent discloses each and every element of the claimed invention. Claims 1 and 13 have been amended to more particularly point out and distinctly claim the subject invention.

Claim 1 is directed toward a method of purifying polyether polyols and claim 13 is directed toward a method of forming a polyurethane from the purified polyether polyol. As discussed at length in the section titled "Background of the Invention" of the specification as originally filed, numerous related art methods have been developed to purify starting components, such as, ethylene oxide, propylene oxide, buytlene oxide, and the like, which are used to form polyether polyols. However, it was experimentally

discovered that polyurethane foams formed from these purified starting components resulted in foams that were commercially unacceptable. It is believed that these results occurred because impurities were present in the purified starting components.

As also discussed in the "Background of the Invention" section of the specification as originally filed, it is believed that the shipping and storing of the purified starting components allows impurities to become present and therefore, the purified starting components are no longer pure and do not produce adequate foam.

Accordingly, the subject invention discovered that any additional impurities present in the starting components could be removed ***after*** the polyether polyol has been formed from the starting components. Claim 1, as amended, claims a method of purifying polyether polyols of non-volatile impurities. The method comprises the steps of providing a ***crude polyether polyol*** comprising a reaction product of an initiator and at least one of propylene oxide and ethylene oxide.

The starting components for the polyether polyol include, but are not limited to, propylene oxide, ethylene oxide, or mixtures of propylene oxide and ethylene oxide. As understood by those skilled in the art, the polyether polyol may be all propylene oxide with ethylene oxide end capping or vice versa. Alternatively, the polyether polyol could be a mixture of ethylene oxide/propylene oxide and a mixture of ethylene oxide/propylene oxide end caps.

Claim 1 has been amended to more particularly point out and distinctly claim that the crude polyether polyol that is purified is formed from an initiator and a starting component. The subject invention is not claiming a method of purifying the starting components prior to forming the polyether polyol.

After formation of the polyether polyol, at least one non-volatile impurity having a number-average molecular weight of at least 25,000 Daltons is present in the polyether polyol. It is believed that the impurity results from the storage or the shipping of the starting components, such as the propylene oxide or the ethylene oxide, even after these starting components have been purified. The ***crude polyether polyol*** is contacted with an adsorbent for a time and under conditions sufficient to adsorb substantially all of the non-volatile impurities onto the adsorbent and a ***purified polyether polyol*** is then separated from the adsorbent.

Claim 13, as amended, claims a method of forming a polyurethane foam. The method comprises the steps of contacting a crude polyether polyol with an adsorbent for a time and under conditions sufficient to absorb substantially all of a non-volatile impurity onto the absorbent. The crude polyether polyol comprises a reaction product of an initiator and at least one of propylene oxide and ethylene oxide and has present therein the non-volatile impurity. The non-volatile impurity has a number-average molecular weight of at least 25,000 Daltons.

A purified polyether polyol is separated from the adsorbent after contacting the crude polyether polyol with the adsorbent. The purified polyether polyol is then reacted with at least one isocyanate to produce a polyurethane foam having increased stability compared to a foam prepared using the crude polyether polyol.

Since neither the '366 patent or the '807 patent discloses, suggests, or teaches a method of purifying a crude polyether polyol, claims 1 and 13 are believed to be allowable. Claims 2-12 and 14-24, which depend directly or indirectly from claims 1 and 13, are also believed to be allowable.

Accordingly, it is respectfully submitted that the Application, as amended, is now presented in condition for allowance, which allowance is respectfully solicited. Applicant believes that no fees are due, however, if any become required, the Commissioner is hereby authorized to charge any additional fees or credit any overpayments to Deposit Account 08-2789.

Respectfully submitted

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January 25, 2005
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CERTIFICATE OF MAILING

I hereby certify that this Amendment for United States Patent Application Serial Number 10/813,725 filed March 31, 2004 is being deposited with the United States Postal Service as First Class Mail, postage prepaid, in an envelope addressed to the Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450 on **January 25, 2005**.

Melissa S. Dadisman

KKH/